



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,481	12/26/2001	Kazuo Tahara	381NP/50398	4445

23911 7590 03/16/2004  
CROWELL & MORING LLP  
INTELLECTUAL PROPERTY GROUP  
P.O. BOX 14300  
WASHINGTON, DC 20044-4300

EXAMINER
----------

SHRIVER II, JAMES A

ART UNIT	PAPER NUMBER
----------	--------------

3618

DATE MAILED: 03/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/936,481

Applicant(s)

TAHARA ET AL.

Examiner

J. Allen Shriver

Art Unit

3618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 15-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-28, 32-36 and 40 is/are rejected.
- 7) ☒ Claim(s) 29-31 and 37-39 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's submittal of an amendment was received on December 12, 2003, wherein claims 15-40 were amended.
2. The indicated allowability of claims 15-40 is withdrawn in view of the newly discovered reference(s) to Kinoshita et al. (US Patent 6,066,928). Rejections based on the newly cited reference(s) follow.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. **Claim 32 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.** Claim 32 recites the limitation "the switching element" and "said inverter main circuit" in line 6. There is insufficient antecedent basis for this limitation in the claim.

### *Claim Rejections - 35 USC § 102*

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

Art Unit: 3618

by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

**6. Claims 15-16, 25-28 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Kinoshita et al. (US Patent 6,066,928).** Kinoshita et al. discloses a power generator in hybrid car comprising a motor generator (12) mechanically connected with the crank shaft of an internal combustion engine (11) for driving a car wherein said internal combustion engine is started by electric power supplied by a battery device (14) and power is generated by rotation from said internal combustion engine to charge said battery device, an inverter (3) for controlling the drive and power generation of said motor generator, and a control circuit (inherent to have a control circuit to control the inverter); said hybrid car further characterized in that; said motor generator is driven by battery power to start said internal combustion engine, and after said internal combustion engine has started, said battery device is charged by a generator mode of said motor generator using the power from said internal combustion engine; wherein a step-down chopper circuit (10) is provided between the battery and the inverter (See Fig. 17); and step-down control is provided to ensure that the power generation voltage will reach the level of the battery charging voltage through said step-down chopper circuit; **[claim 16]**

Art Unit: 3618

wherein a step-up chopper circuit is provided on the output said of the battery device (See Fig. 17), and when the motor generator is started by the electric power of the battery device, a battery voltage is stepped up to drive said motor generator and to start said internal combustion engine (See column 1, line 51+).

Regarding claims 25-28 and 32, under the principles of inherency, if a prior art device, in its normal usual operation, would necessarily perform the claimed method, then the method claimed will be considered to be anticipated by the prior art device. When the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process. *In re King*, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986). In this case, the device/apparatus disclosed in Kinoshita et al. would inherently perform the method disclosed in claims 25-28 and 32.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinoshita et al. (US Patent 6,066,928).** Kinoshita et al. Discloses a power generator in a hybrid car as set forth above, but does not specifically disclose wherein said motor generator is a permanent magnet field motor generator having its rotor equipped with a permanent magnet and constituting a field pole or a jaw type magnetic pole synchronous

Art Unit: 3618

motor generator having its rotor with jaw type magnetic pole field, wherein the weak field rate is 1 to less than 4; and that the motor is an induction motor is an induction motor equipped with multiple secondary conductors.

A permanent magnet field motor generator having its rotor equipped with a permanent magnet and constituting a field pole or a jaw type magnetic pole synchronous motor generator and wherein the motor is an induction motor is old and well known to be a type of electric motor generator selected for use in a hybrid vehicle.

Kinoshita does not specifically disclose wherein the weak field rate is 1 to less than 4. However, the magnetic interaction between the stator and the rotor of an induction electric motor is repulsive, the rotor is pushed about in a circle by the stator's magnetic field. For reasons having to do with resistive energy loss and heating, the repulsive forces in front of and behind the moving magnet don't cancel perfectly, leading to a magnetic drag force between the moving magnet and the stationary plate, which is a weak field rate. In an induction motor, the same magnetic drag force tends to push the rotor around with the rotating magnetic field of the stator. Therefore, the range of the field rate of the magnets is variable depending on the type and size of the magnet. A person of ordinary skill in this art would have the requisite skill to select an electric motor that produced a weak field rate in the range of 1 to less than 4, so that the enough repulsive magnetic force would be produced to rotate the rotor around the stator of the electric motor.

**9. Claims 21-24, 33-36 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinoshita et al. (US Patent 6,066,928) in view of Sasaki (US Patent 6,476,571 B1). Kinoshita et al. Discloses a power generator in a hybrid car as set**

Art Unit: 3618

forth above, but does not disclose wherein said battery device comprises an auxiliary battery of 14-volt charging voltage as a light source for a lamp device, and a main battery of 42-volt charging voltage. Sasaki discloses a hybrid vehicle wherein said battery device comprises an auxiliary battery (184) to supply low voltage for a vehicle's lights, and a main battery (194) for supplying charging voltage. At the time of the invention, it would have been obvious to a person of ordinary skill in this art to provide an auxiliary battery (low voltage battery) and a main battery (high voltage battery) for the vehicle disclosed in Kinoshita et al. in view of the teaching of Sasaki. The motivation for doing so would have been to supply the proper voltage to a plurality of devices (including the electric motor, lamps and controllers) each having different predetermined voltage ratings.

#### ***Allowable Subject Matter***

10. Claims 29-31 and 37-39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Allen Shriver whose telephone number is (703) 308-1224. The examiner can normally be reached on Mon-Thurs 7:30-6:00.

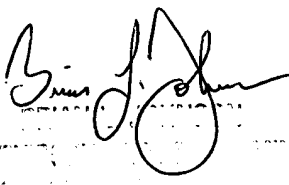
Art Unit: 3618

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian L. Johnson can be reached on (703) 308-0885. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

J. Allen Shriver  
Examiner  
Art Unit 3618

JAS  
JAS

  
3/18/09